

IN THE ABSTRACT

Please replace the Abstract, as filed, with the following Abstract:

-- Systems and methods for improving transducer response sensitivity in an ultrasound-imaging system are disclosed. One method includes selecting a desired transmit spectrum, quantifying the transmit channel impulse response, calculating a drive signal that when applied to the transmit channel will produce the desired transmit spectrum and applying the drive signal to the transducer. The method may be applied in principle to the receive channels. An improved ultrasound-imaging system in accordance with the invention includes a transducer and a switch controlled to apply an excitation signal to the transducer in a transmit mode of the ultrasound-imaging system. A signal shaper is configured to generate an excitation signal in response to the impulse response of the transmit channel such that a desired ultrasound energy waveform is generated by the transducer. An adaptable filter responsive to a desired echo spectrum and the impulse response of the receive channel of the system may be included.--.